

Amendment  
Serial No. 10/779,446

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5000-1-522

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### REMARKS

Reconsideration of all grounds of objection and rejection and allowance of all the pending claims are respectfully requested in light of the above amendments and the following remarks. Claims 1-14 are pending in the application, of which claims 1, 8, 9 and 14 are independent claims. Claims 8-9 have been withdrawn from consideration due to the election requirement.

Claims 10-13 have been amended to remove some minor informalities.

Claims 1-5 and 14 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Admission (hereinafter "APA" for Admitted Prior Art) in view of Kamalov *et al.* (U.S. 7,149,424) ("Kamalov"). Claim 6 stands rejected as allegedly being obvious over APA and Kamalov as applied to claims 1-5 and 14, and further in view of Ahn *et al.* (B. Ahn *et al.*, "A Symmetric-Structure CDMA-PON System and Its Implementation", IEEE Photonics Technology Letters, Vol. 14, No. 9, September 2002) ("Ahn"). Claim 7 stands rejected under 35 U.S.C. §103(a) as allegedly being obvious over APA, Kamalov and Ahn as applied to claim 6, and further in view of DeCusatis *et al.* (U.S. 7,061,944) ("Decusatis"). Claims 10-13 stands rejected under 35 U.S.C. §103(a) as allegedly being obvious over APA and Kamalov as applied to claims 1-5 and 14, and further in view of Argon *et al.* (U.S. 6,847,760) ("Argon"). Applicant respectfully traverses these grounds of rejection for the reasons indicated herein below.

Claim 1 has been amended to clarify that the passive optical network according to the present invention includes a plurality of ONUs, each having an assigned code, which includes being configured for demodulated received signals that are split into a

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downstream signal and error information comprising error correction codes. The ONU is also configured for transmitting signals that are encoded with the assigned code frequency controlled according to the received error correction codes. Furthermore, a central office decodes the signals transmitted from the ONU and provides error counts of the error correction codes to the ONU as the error information based on a quality of the signals transmitted by the ONU (specification at page 12, lines 5-8, with enhanced explanation from lines 9-20).

Thus, as claim 1 recites, *inter alia*: said ONU encoding optical signals for transmission with the assigned code and controlling the frequency of the encoded optical signals according to error correction codes from the received error information, and that the central office is providing error counts of the error correction code to the ONU as the error information based on a quality of the signals transmitted by said ONU, it is respectfully submitted that claim 1 would not have been obvious to a person of ordinary skill in the art over the combination of APA and Kamalov.

Applicant respectfully submits that regarding the combination of APA and Kamalov, there is no teaching, suggestion, or motivation to combine the teachings of the APA and Kamalov, nor would the combination of recited elements in claim 1 have within the ordinary level of skill in the art. In fact, the APA clearly teaches away from references using WDM, and it is clear, despite boilerplate statements made to the contrary in Kamalov, that a WDM system is the only system contemplated by this reference. Thus, the combination does not obviate claim 1 as the reference and APA teach away from each other.

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In addition, even if a person of ordinary skill in the art were to have combined the APA and Kamalov, there is no suggestion as to how a CDMA PON would provide an ONU with using FEC and pseudo-noise, for example, to modulate/encode a transmitted signal to the OLT, which demodulates the signals, and generates error codes in a quality monitoring function that is transmitted back to the ONU in the form of error correction codes along with the assigned pseudo-noise code for particular ONU. Absent in the art is knowledge regarding the Applicant's claims, and Applicant respectfully submits that the claimed invention is being used as a roadmap in which items that teach away from each other are being combined improperly.

Moreover, the combination of APA and Kamalov fails to disclose or suggest how PN codes and error correction codes could both be used by the ONU for a transmitted signal. Nor does the combination of APA and Kamalov disclose or suggest that the central office monitors quality of the transmitted signals received by the respective ONUs and generates error information to be provided to the ONU.

For at least the above reasons, Applicant respectfully submits that claim 1 (as well as independent claim 14, which recites an ONU according to the present invention) would not have been obvious to a person of ordinary skill in the art in view of the combination of APA and Kamalov.

With regard to the rejection under 35 U.S.C. §103(a), Applicant respectfully submits that that the United States Court of Appeals for the Federal Circuit required a showing of an un rebutted prima facie case of obviousness (*In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998) (citing *In re Deuel*, 51 F.3d 1552, 1557, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995))). According to United States Court of Customs

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and Patent Appeals, the predecessor to the Federal Circuit, the *prima facie* case can be established only if the prior art references, among others, teach all features in the claims (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1970); see also MPEP 2143.03), or if the claim or claims recite features as combined in the claims that would have been within the ordinary skill in the art (*KSR International Co. v. Teleflex Inc. et al.*, No. 04-1350, U.S. Supreme Court, decided April 30, 2007).

With regard to the above paragraph, Applicant respectfully submits that the Office Action does not set forth a proper *prima facie* case of obviousness under 35 U.S.C. §103(a) because the features, as combined in the claims, are clearly not obvious over the combination of APA and Kamalov, or within the level of ordinary skill in the art.

In view of the all of the above, Applicant respectfully requests reconsideration and withdrawal of the rejection of independent claims 1 and 14.

With regard to the other claims in this application, which are each dependent from independent claim 1, are therefore believed patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each claim on its own merits is respectfully requested. Applicant respectfully submits that the inclusion of Ahn, DeCusatis, and/or Argon with the combination of APA and Kamalov still fails to render either of independent claims 1 or 14 obvious to a person of ordinary skill in the art.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

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In the event that any additional fee is required to continue the prosecution of this Application as requested, please charge such fee to Deposit Account No. 502-470. If the Examiner has any questions regarding this Application, it is respectfully requested that the Applicants' attorney of record be contacted at the below-noted telephone number.

Respectfully submitted,

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